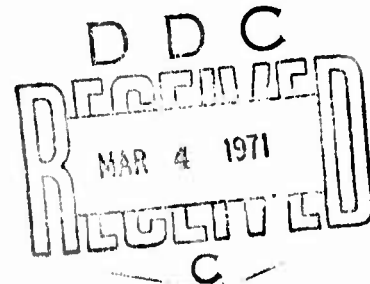


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Materiel Test Procedure 7-3-087
Aviation Test Board

US ARMY TEST AND EVALUATION COMMAND
COMMODITY SERVICE TEST PROCEDURE

CLOTHING (AVIATION)



AD719106

1. OBJECTIVE

This document provides existing test methods and techniques necessary to determine the degree to which aviation clothing meets the requirements of the Qualitative Materiel Requirement (QMR), Small Development Requirement (SDR), or Technical Characteristics (TC's), and whether or not these garments are suitable for Army use.

2. BACKGROUND

Flight crewmember clothing and accessories must provide the wearer varying degrees and forms of protection and, at the same time, be comfortable and functional within the Army aviation operational environment. These garments must convey a suitable military appearance, be similar to the ground soldier's uniform, possess material characteristics which reduce fading and shrinkage, and be simple to launder and maintain in the field.

Overall, Army aviation clothing requirements may be summarized as clothing which --

a. Provides reasonable comfort, adequate protection, and functional freedom of movement for the crewmember within various Army aircraft and while performing aviation tasks on the ground.

b. Protects the wearer from hazards and adverse conditions resulting from pre-, post-, and in-flight emergencies including fire or unexpected exposure to wind blast and cold temperatures.

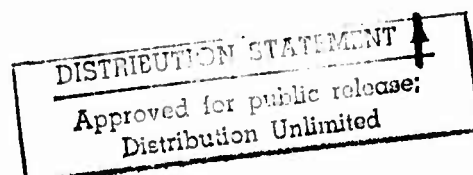
c. Enhances the probability of crewmember survival following bail-out or forced landing in hostile terrain under climatic conditions which may vary from those of the desert, arctic, or the tropics.

d. Protects the wearer from the toxic effects of various chemical agents with which he may come in contact while transporting or disseminating the agents from appropriate Army aircraft.

The aviation clothing service test must provide for assessing wearer physical and psychological reactions to the clothing, the degree of protection afforded under various routine and emergency conditions, and the ease with which the garments are maintained and cleaned under operational conditions.

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3. REQUIRED SUPPORT

- a. Measuring tools to determine dimensions, weights, and time.
- b. Test subjects with appropriate MOS.
- c. Photographic equipment.
- d. Sizing and fitting facilities.
- e. Various ground soldier uniforms.
- f. Data reduction (forms, questionnaires) personnel.
- g. Inspection (pretest and post-test) personnel.
- h. Various aircraft.
- i. Appropriate personal equipment.
- j. Aviation clothing in current use and of new quality.

4. REFERENCES

- A. USATECOM Regulation 70-23, Research and Development: Equipment Performance Reports (EPRs).
- B. USATECOM Regulation 70-24, Research and Development: Documenting Test Plans and Reports. (As implemented by USAAVNTBD Pamphlet 705-1.)
- C. USATECOM Regulation 385-6, Safety: Verification of Safety of Materiel During Testing. (As implemented by USAAVNTBD Memo 385-10.)
- D. USATECOM Regulation 700-1, Quality Assurance: Value Engineering.
- E. USATECOM Regulation 108-1, Photographic Coverage. (As implemented by USAAVNTBD Memo 108-1.)
- F. MTP 7-3-090, Rescue Equipment, Aircraft Crash.
- G. MTP 7-3-500, Physical Characteristics.
- H. MTP 7-3-501, Personnel Training.
- I. MTP 7-3-510, Human Factors.
- J. MTP 7-3-519, Photographic Coverage

5. SCOPE

5.1 SUMMARY

The evaluation of aviation clothing suitability for comfort and protection is only one element of the overall service test requirement. Additional elements of the service test must address maintenance considerations, safety aspects, limitations involved in donning or doffing, compatibility with personal equipment and appropriate aircraft, and suitability of the clothing from the human factors standpoint. Also, the suitability of the test clothing as a replacement for clothing in current use must be evaluated.

To quantitatively evaluate these elements, service tests are conducted under operational conditions by personnel representative of those who will wear the test clothing in addition to existing clothing in actual Army/aviation operations. The service test will include the observations of project personnel together with those of appropriate specialists called upon to comment on the clothing. Test personnel will be interviewed, and

their observations and recommendations concerning both the test clothing and existing clothing will be recorded by questionnaire and correlated with other information and photographic documentation.

The data collected during the service test will be reviewed to obtain subjective and numerical indicators which characterize the clothing's utility. Tabulations, charts, and other graphic displays will be employed to present these indicators. Evaluation of the test clothing data will include comparisons with desired performance criteria and with the performance indicators from the use of control (standard issue) clothing employed in similar or identical mission roles.

5.1.1 Preparation for Test

This section provides guidance for test project planning, facility and equipment requirements, and preparation for test personnel training and familiarization.

5.1.2 Test Conduct

The following tests are provided by this document.

a. Arrival Inspection and Physical Characteristics -- Procedures for an evaluation of the test clothing's arrival condition and for determining the clothing's sizes and weights are included.

b. Functional Suitability -- This section provides procedures for evaluation of the areas listed below.

- 1) Donning and doffing.
- 2) Protection of the wearer.
- 3) Compatibility with the aviation environment.
- 4) Appearance.
- 5) Comfort.

c. Human Factors -- An assessment of wearer's physical and psychological reaction to the test clothing following prolonged usage.

d. Durability -- An evaluation of the clothing's suitability for prolonged operational use.

e. Maintainability -- An evaluation of the clothing's suitability from the standpoint of ease of repair, cleaning and maintenance.

5.1.3 Test Data

This section details the test clothing data to be collected and recorded while completing the procedures of 6.2, Test Conduct.

5.1.4 Data Reduction and Presentation

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This section provides instructions for evaluating and displaying the data recorded and collected during testing.

5.2 LIMITATIONS

a. This MTP is intended to be used as a basic guide when preparing test plans for aviation clothing. Suitability for Army use criteria and attendant test procedures shall be determined in response to specific QMR, SDR, or TC requirements.

b. The guidance provided by this document is applicable only to aircraft crewmember clothing.

6. PROCEDURES

6.1 PREPARATION FOR TEST

The project officer should follow Reference 4B with respect to plans and reports of tests. Certain planning information specifically applicable to aviation clothing is provided by the following paragraphs.

6.1.1 Test Planning

6.1.1.1 Test Criteria

The project officer will select test criteria which will adequately satisfy the officially stated objectives for service testing and aviation clothing. Efforts should include, as a minimum, the following actions:

- a. Review the test directive.
- b. Study the QMR, SDR, or TC's.
- c. Review authorized sources of criteria such as --
 - 1) Designated test directive references.
 - 2) Clothing specifications, or drafts thereof.
 - 3) Special instructions accompanying the test directive.
- d. Review authorized criteria inputs from cooperating agencies

such as --

- 1) United States Army Aeromedical Research Laboratory (USAARL).
- 2) United States Army Aviation School.
- 3) United States Army Board for Aviation Accident Research (USABAAR).

e. Study test clothing engineering test data, recommendations, and conclusions, as applicable.

f. Generate clothing usage schedules and coordinate with appropriate levels of command as necessary to obtain appropriate test subjects. See 6.1.2.

6.1.1.2 Required Equipment, Facilities and Personnel

Arrange for the items listed under Section 3, Required Support, and for special consultants, e.g., aeromedical specialists, etc., or other personnel required during the service test but not normally available at the test site. Schedule photographic coverage required; see Reference 4E.

6.1.2 Test Clothing Issue

Select personnel whose regular duties, TDY assignments, and/or training commitments will afford an overall usage schedule of maximum exposure to the aviation operational environment within the time frame allocated for the service test. Consider, as a minimum, the following elements:

a. Select personnel of the occupational specialty for which the test clothing is intended. Personnel whose body sizes are within the median, fifth, and ninety-fifth percentiles should be represented in the test subject group (provided appropriate sized test clothing is available).

b. Obtain measurements and weight of each person's body. Convert to appropriate garment size. Record this data by name.

c. Issue quantities of test clothing and in-service clothing in accordance with the known or anticipated Table of Allowances.

d. Photograph representative personnel wearing both the test clothing and the various existing clothing system prior to operational usage.

6.1.3 Familiarization

Consult appropriate sections of MTP 7-3-501, Personnel Training, and familiarize test personnel with the test clothing and procedures of the service test. Accomplish, as a minimum, the following actions:

a. Familiarize personnel with the clothing under test.

b. Familiarize personnel with specific evaluation objectives.

c. Acquaint test personnel with questionnaires, forms, etc., which are required to be filled out during the operational evaluation of the clothing items.

d. Demonstrate the recommended technique for donning and doffing the clothing, as applicable.

e. Familiarize personnel with recommended laundry methods and any restrictions to be observed.

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f. Provide instructions for clothing maintenance (both minor and major repair) during the operational evaluation(s), e.g., fastener repair, mending, etc.

g. Familiarize appropriate personnel with MTP 7-3-519, Photographic Coverage, and that portion of USATECOM Regulation 108-1, Photographic Coverage, applicable to the photographic coverage required.

6.2 TEST CONDUCT

6.2.1 Arrival Inspection and Physical Characteristics

6.2.1.1 Arrival Inspection

a. Inspect shipping containers for evidence of damage. Photograph any damage noted.

b. Examine container markings and record those which identify contents and indicate quantity and clothing size(s).

c. Unpack the clothing and inventory the contents against the Basic Issue Item List (BIIL) and external container markings which identify contents. Submit Equipment Performance Reports (EPRs) where shortages in inventory lists and contents are found to exist.

d. Confirm suitability of the clothing for test as demonstrated by freedom from variations in workmanship, damage or defect. Clothing damage and/or material defect(s) shall be photographed and reported by EPR.

6.2.1.2 Physical Characteristics

Consult the overall procedures of MTP 7-3-500, Physical Characteristics, and perform the following:

a. Obtain the following clothing measurements and record the results:

- 1) Chest -- Measure the chest of the clothing, from side seam to side seam, at the bottom of the armholes.
- 2) Sleeve length -- Measure along the sleeve inseam, from the base of the armhole to the bottom of the sleeve cuff.
- 3) Leg inseam length -- Measure along the trouser inseam, from the center of the crotch to the bottom on the leg.
- 4) Waist -- Measure along the belt line.

b. Weigh each clothing item.

c. Photograph, as applicable.

6.2.2 Functional Suitability

6.2.2.1 Donning and Doffing

a. Observe and photograph personnel donning the test clothing. Evaluate, as a minimum, the following:

- 1) Ability of the wearer to don the clothing while wearing various authorized and applicable items of underclothing and footwear, including flight boots.
- 2) Time required to don the test clothing under various simulated operational conditions.

b. Observe and photograph personnel doffing the test clothing under simulated emergency and routine conditions. Record the time required in each case.

c. Request that each test subject complete a questionnaire similar to that provided by Appendix A.

6.2.2.2 Protection to the Wearer

Evaluate the degree to which the test clothing protects the wearer in typical and adverse aviation operational environments under a variety of climatic and transition conditions. Perform the following:

a. Issue the test clothing to flight personnel scheduled for temporary duty assignment (TDY) at Army facilities located in sections of the country experiencing warm (or cold) and transition (spring-fall) conditions, as applicable. Brief the test subjects according to 6.1.2, Familiarization, and request that a questionnaire similar to that provided by Appendix A, be completed during and following the TDY assignment.

b. Request that project personnel scheduled to wear the clothing at the Aviation Test Board test site perform their required regular duties and training, as applicable. Brief these test subjects according to 6.1.3, Familiarization, and request that a questionnaire similar to that provided by Appendix A, be completed following the designated period of test clothing usage.

c. Employ the test clothing as alternate garments during the evaluation of rescue subsystems or equipments, appropriate. Evaluate, as a minimum, the change (increase-decrease) in observed protection as compared to existing (control) clothing as demonstrated by applicable records or readings obtained from instrumented, clothed dummies. See MTP 7-3-090, Rescue Equipment, Aircraft Crash.

d. Employ the test clothing as alternate garments during the evaluation of survival equipment/kits and/or during survival training. Evaluate, as a minimum, the degree of protection offered the wearer under the

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adverse conditions encountered under realistic survival conditions.

e. If applicable, determine the fire retardant or proofing qualities of the clothing both before and after laundering/cleaning.

6.2.2.3 Compatibility

a. Evaluate the test clothing's compatibility with standard field clothing items and personal equipment, including --

- 1) Weapons, e.g., the .45 caliber pistol.
- 2) Survival equipment, such as the survival knife, etc.
- 3) Parachutes.
- 4) Personnel armor.
- 5) Protective helmet.
- 6) Oxygen and protective masks.

b. Evaluate the test clothing for compatibility with various Army aircraft interiors/exterior including seats, compartment doors, passage-ways, crewmember stations, maintenance positions, etc. Record any evidence of the clothing catching, snagging, or interfering with the entrance to or exit from the aircraft. Observe crewmembers performing routine and simulated emergency actions at normal and alternate crewmember stations and evaluate, as a minimum, the following:

- 1) Test clothing pockets in regard to --
 - a) Size.
 - b) Number.
 - c) Location.
 - d) Accessibility with one hand with and without gloves and while performing flight duties with normal flight personal equipment.
 - e) Closure suitability.
- 2) Comfort and protection adjustments in regard to --
 - a) Accessibility with one hand with and without gloves.
 - b) Ease in obtaining the desired adjustment effect.
 - c) Effectiveness of the adjustment with respect to its intended use.
- 3) Restriction of movement of limbs.

c. Photograph, where possible, findings of the evaluations listed above. (a. through c.)

d. Request test subjects to complete a questionnaire similar to that illustrated by Appendix A, 3.

6.2.2.4 Appearance

a. Record observing personnel's qualified comments on appearance

and suitability of the test clothing.

b. Evaluate the test clothing in terms of neatness and acceptable military appearance following various flight operations. Estimate the maximum interval between clothing maintenance actions (cleaning, laundering, etc.) required to retain an acceptable military appearance. Record any indications of the test clothing becoming excessively wrinkled, creased, or deformed in a manner which would detract from the appearance of the wearer.

c. Evaluate the test clothing's susceptibility to stain or to manifest in other ways evidence of unsightly, premature soilage.

d. See Appendix A , for a suggested questionnaire.

6.2.2.5 Comfort

a. Evaluate the wearer's comfort while performing primary and his ability to perform required tasks with minimal restrictions. This evaluation must be conducted under climatic conditions representative of the zone(s) and seasons for which the item is intended for use.

b. Subjective opinions of participants should cover the following:

- 1) Crotch of trousers; cut too high or low.
- 2) Legs too narrow.
- 3) Sleeves too narrow to allow freedom of movement.
- 4) Material too light or too heavy.
- 5) Garment too hot or too cool.
- 6) Means of adjustments adequate or inadequate.
- 7) Degradation of performance in any task.

6.2.3 Human Factors

a. Human factors evaluations shall be conducted simultaneously with all phases of the clothing service test. Incorporated applicable procedures of MTP 7-3-510, Human Factors, reference 4.J, and obtain evaluation support from USABAAR and USAARL as required.

b. Evaluate test clothing suitability of fit using the test subject's size as determined by the Combat Sizing System.

c. Obtain the wearer's reactions to the test clothing in the following areas:

- 1) Comfort while performing primary duties (climatic protection, freedom of movement, and absence of irritation).
- 2) Ease of donning and doffing.
- 3) Ease of removing in emergency situations.
- 4) Quality of fit for encountered climatic conditions.
- 5) Ease of fastening.

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- 6) Ease and suitability of adjustments.
- 7) Perspiration absorption characteristics.
- 8) Offensive odors.

d. Request that each test subject complete a questionnaire similar to that provided by Appendix A.

6.2.4 Durability

a. Examine each item of test clothing at the completion of the service test for evidence of wear or other deterioration. Determine the extent of repairs accomplished by the test subject and record the number of occurrences and nature of any major repairs performed during the test period.

b. Evaluate the test clothing for evidence of fading, shrinkage, and change in fire retardant or proofing qualities (if applicable).

c. Request that each test subject complete a questionnaire similar to that provided by Appendix A.

6.2.5 Maintainability

Determine the extent of repairs accomplished by the clothing repair shop of the following:

- a. Closing devices (zippers, buttons).
- b. Repair of holes or tears in cloth.
- c. Repair of flaps, tabs and belt loops.

d. Request that each test subject complete a questionnaire similar to that provided by Appendix A.

NOTE: Repairs costing over 35 percent of the original cost will be basis for classifying the item "uneconomical for repair."

6.3 TEST DATA

6.3.1 Preparation for Test

6.3.2 Test Conduct

6.3.2.1 Arrival Inspection and Physical Characteristics

6.3.2.1.1 Arrival Inspection -

Record the following:

- a. Markings which appear on the shipping container.
- b. Results of inventories conducted against the BIIL, container markings, and/or packing lists. Note number of EPRs submitted.
- c. Status of the recieved clothing with respect to suitability for service test, e.g., freedom from serious defects, variations in workmanship, etc.

6.3.2.1.2 Physical Characteristics -

Record the following:

- a. Chest measurement (inches).
- b. Sleeve length (inches).
- c. Leg inseam length (inches).
- d. Waist (inches).
- e. Weight of each clothing item (ounces).

6.3.2.2 Functional Suitability

6.3.2.2.1 Donning and Doffing -

Record the following:

- a. Number of test subjects participating.
- b. Donning --
 - 1) Simulated operational conditions.
 - 2) Identification of clothing worn at time donning of test clothing was initiated.
 - 3) Average length of time required.
 - 4) Any problems encountered.
- c. Doffing --
 - 1) Emergency conditions simulated.
 - 2) Average length of time required.
 - 3) Any problems encountered.
- d. Test subjects completed questionnaire (see Appendix A)

6.3.2.2.2 Protection to the Wearer -

Record the following:

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- a. Number of test subjects participating.
- b. TDY (Opposite and Transition Climates) --
 - 1) Number.
 - 2) Locations.
 - 3) Length of time at each.
 - 4) Details of climatic conditions, temperature extremes and mean.
- c. Regular duty --
 - 1) Duties performed while wearing test clothing for each test subject.
 - 2) Number of tests subjects participating.
 - 3) Suitability of clothing for regular duty use.
- d. Emergency conditions (survival) --
 - 1) Description of survival conditions simulated.
 - 2) Number of participants.
 - 3) Length of usage.
 - 4) Problems encountered.
 - 5) Suitability of clothing for survival situations.
- e. Emergency conditions (aircraft crash) --
 - 1) Description of test conditions.
 - 2) Degree of protection offered in each situation in comparison to control clothing.
 - 3) Suitability of clothing.
- f. Test participant questionnaire --
(See Appendix A)

6.3.2.2.3 Compatibility -

Record the following:

- a. Degree of compatibility with personal equipment (identify each interface evaluated).
- b. Aircraft compatibility --
 - 1) Type of aircraft evaluated with clothing.
 - 2) Degree of unencumbered manipulation of aircraft controls, fire control equipment, and all other related items available in the same time frame. Identify in detail.

- c. Suitability of test clothing pockets.
- d. Results of test participant's questionnaire --
(See Appendix A)

6.3.2.2.4 Appearance -

Record the following:

- a. Qualified comments regarding the test clothing.
- b. Military appearance and neatness of the clothing following various flight operations (identify and describe).
- c. Test clothing resistance to stains, POL, dirt, etc.

6.3.2.2.5 Comfort -

Record the following:

a. Qualified opinions regarding comfort of the test clothing with regard to:

- 1) Crotch of trousers.
- 2) Size of trouser legs.
- 3) Size of sleeve and freedom of arm movement.
- 4) Weight.
- 5) Fit too snug or too loose causing test clothing to be too warm or too cool.
- 6) Adjustments.
- 7) Ability to perform tasks.

b. Overall degree of comfort rating -- see Appendix A)

6.3.2.3 Human Factors

a. Record user reactions in the following areas:

- 1) Comfort and freedom from irritations.
- 2) Ease of donning and doffing.
- 3) Quality of fit for climatic protection.
- 4) Perspiration absorption characteristic.
- 5) Ease and suitability of adjustments.
- 6) Compatibility with standard field garments and footwear.

b. Test participant questionnaire (See Appendix A)

6.3.2.4 Durability

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Record the following:

- a. Amount and type of repairs required.
- b. Favorable and unfavorable aspects of repair of the test clothing.
- c. Wear or damage incurred during the test.
- d. Effects of laundering and cleaning.
- e. Test participants' questionnaire responses. (See Appendix A.)

6.3.2.5 Maintainability

Record the following:

- a. Amount of maintenance required.
- b. Favorable and unfavorable aspects of maintenance of the test clothing.
- c. Test participants' questionnaire responses. (See Appendix A.)

6.4 DATA REDUCTION AND PRESENTATION

All data taken during the service test will be summarized using tabulations and/or charts, as appropriate.

Where photographs are used, positive identification will be insured.

The data will be analyzed to determine to what degree the test clothing meets the QMR, SDR, or TC requirements.

The presentation will conclude with a summarization of the test clothing suitability for use by the Army.

APPENDIX A

Test Clothing Questionnaires

This Appendix contains questions which are not based on a specific QMR, SDR, or TC. Rather, the questions are provided as samples of the types of queries which might be useful in obtaining user reaction to aviation clothing yet to be specified. The questions are divided into functional categories which match the individual MTP evaluations. Final order of the questionnaires should be arranged to suit the specific evaluation requirement.

1. Donning and Doffing

a. Did the clothing offer an advantage in dressing for duty following an alert signal? Yes _____ No _____

Comments. _____

b. Do you believe the clothing would be easy to doff under emergency conditions? Yes _____ No _____

Comments. _____

2. Protection to the Wearer

a. Approximately how many days did you wear the test clothing and what were the approximate extreme temperatures encountered?

	No. Days	Low Temp	High Temp
Test Clothing X	_____	_____	_____
Test Clothing Y	_____	_____	_____
Test Clothing Z	_____	_____	_____

b. Did the clothing provide adequate protection in these temperatures?
Yes _____ No _____

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Comments. _____

c. Are the water repellant characteristics of the test clothing adequate?
Yes _____ No _____

3. Compatibility

a. Did the garment snag on objects, controls, or switches in the aircraft, thereby hindering emergency exit, normal egress, or the safe operation of the aircraft? Yes _____ No _____

Comments. _____

b. Were all pockets accessible during flight? Yes _____ No _____

Comments. _____

c. Could the ventilation of the clothing be adjusted in flight with one hand? Yes _____ No _____

Comments. _____

d. Did pocket closures permit easy opening and closing while wearing flying or standard issue gloves? Yes _____ No _____

Comments. _____

e. Could the clothing be donned while wearing combat boots? Yes _____
No _____

Comments. _____

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f. Did the clothing interfere with normal crewmember functions (restrict the movement of limbs? Yes_____ No_____

Comments. _____

g. Was any difficulty or discomfort encountered while wearing the parachute or other equipment? Yes_____ No_____

Comments. _____

4. Appearance

a. Do you feel that the test clothing presents an adequate military appearance? Yes_____ No_____

Comments. _____

b. Do you feel that the clothing has suitable wrinkle resistant characteristics? Yes_____ No_____

Comments. _____

c. Do you feel that the test clothing is sufficiently similar to the ground soldier's uniform? Yes_____ No_____

Comments. _____

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5. Human Factors

a. Did the clothing absorb perspiration? Yes _____ No _____

Comments. _____

b. Did the clothing cause skin irritation? Yes _____ No _____

Comments on degree and treatment required. _____

c. Do you like the test clothing as well as other types of clothing?
Yes _____ No _____

Comments. _____

d. Could the clothing be adjusted to a snug fit at the neck, wrists,
and ankles? Yes _____ No _____

Comments. _____

f. Comments on comfort and fit. _____

6. Safety

a. Comments on any noted clothing hazards. _____

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7. Durability

a. Did the uniform shrink a noticeable amount? Yes_____ No_____

Comments. _____

b. Did the test clothing fade faster or more than the_____ type of uniform? Yes_____ No_____

Comments. _____

c. Did normal laundering of the uniform impair the functional characteristics? Yes_____ No_____

Comments. _____

d. Were grease stains easily removed from the uniform? Yes_____ No_____

Comments. _____

e. How was the clothing laundered? By hand_____, Washing Machine_____, or Commercial Laundry_____. How many times_____?

Comments. _____

f. Was the uniform compatible with the standard-issue over and undergarments that are normally worn? Yes_____ No_____

Comments. _____

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8. Maintenance

a. Was there any maintenance on the uniform required? Yes_____ No_____

Comments. _____

9. Comfort

The following 6-point rating system may be used to determine the degree of comfort rating for the test clothing.

TABLE I

DEGREE OF COMFORT RATING

Rating Scale		Number of Responses By Rating Factor											
Rating Factor	Value	Location:				Location:				Location:			
		Cycles				Cycles				Cycles			
		1	2	3	4	1	2	3	4	1	2	3	4
Extremely comfortable	6												
Very comfortable	5												
Comfortable	4												
Uncomfortable	3												
Very uncomfortable	2												
Extremely uncomfortable	1												
Comments:													
Crotch of trousers is cut too high or low													
Narrow legs													
Narrow sleeves													
Lighter													
Heavier													
Hot													
Cooler													
Adjustments													

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13. ABSTRACT Test procedures are described to determine the degrees and forms of protection, and the relative comfort and functional performance of flight crew member clothing.			

DD FORM 1473

REPLACES DD FORM 1473, 1 JAN 64, WHICH IS OBSOLETE FOR ARMY USE.

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Security Classification

